Appl. No. 10/532,264
Amdt. dated April 23, 2009
Reply to Office Action of December 2, 2008

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.-28. (Cancelled)

29.   (Currently Amended) A method of selecting a dopaminergic neuron precursor cell, wherein the method comprises:

contacting a cell sample thought to comprise a dopaminergic neuron precursor cell with an antibody that binds to:

(a) a polypeptide encoded by a polynucleotide comprising a sequence selected from

    (i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

    (ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 3 or 4;

    (iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4; and

    (iv) a nucleotide sequence encoding an amino acid sequence which has 80% or more identity with the amino acid sequence of SEQ ID NO: 3 or 4; ~~and,~~ or

    ~~(v) a nucleotide sequence that hybridizes under stringent conditions with the complement of the nucleotide sequence of (i), wherein the stringent conditions include post-hybridization washing of three times in 2x SSC/0.1% SDS at room temperature for 20 minutes each, and three times in 1x SSC/0.1% SDS at 37°C for 20 minutes each, and finally twice in 1x SSC/0.1% at 50°C for 20 minutes each, and the nucleotide sequence~~

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~~encodes a protein having a single transmembrane domain and five Ig domains; or~~

(b) a fragment of said polypeptide comprising at least eight amino acid residues; and

~~selecting~~ isolating the dopaminergic neuron precursor cell, wherein the dopaminergic neuron precursor cell has bound to the antibody.

30.   (Previously Presented) The method according to claim 29, wherein the method comprises the step of separating the dopaminergic neuron precursor cell by flow cytometry.

31.   (Previously Presented) The method according to claim 29, wherein the antibody binds to an extracellular region of the polypeptide.

32.   (Currently Amended) A method of producing a cell population comprising dopaminergic neuron precursor ~~cell~~ cells, wherein the method comprises contacting a cell sample thought to comprise [[a]] the dopaminergic neuron precursor ~~cell~~ cells with an antibody that binds to:

(a) a polypeptide encoded by a polynucleotide comprising a sequence selected from

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 3 or 4;

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4; and

(iv) a nucleotide sequence encoding an amino acid sequence which has 80% more identity with the amino acid sequence of SEQ ID NO: 3 or 4; ~~and,~~ or

~~(v) a nucleotide sequence that hybridizes under stringent conditions with the complement of the nucleotide sequence of (i), wherein the stringent~~

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~~conditions include post-hybridization washing of three times in 2x~~
~~SSC/0.1% SDS at room temperature for 20 minutes each, and three times~~
~~in 1x SSC/0.1% SDS at 37°C for 20 minutes each, and finally twice in 1x~~
~~SSC/0.1% at 50°C for 20 minutes each, and the nucleotide sequence~~
~~encodes a protein having a single transmembrane domain and five Ig~~
~~domains; or~~

(b) a fragment of said polypeptide comprising at least eight amino acid residues; and

~~obtaining~~ isolating the cell population comprising dopaminergic neuron precursor cells, wherein the dopaminergic neuron precursor cells have bound to the antibody.

33.   (Cancelled)

34.   (Previously Presented) The method according to claim 32, wherein the method comprises the step of separating the dopaminergic neuron precursor cell by flow cytometry.

35.   (Previously Presented) The method according to claim 32, wherein the antibody binds to an extracellular region of the polypeptide.

36.-40. (Cancelled)

41.   (Previously Presented) The method according to claim 29, wherein the nucleotide sequence of (iv) of (a) encodes a protein having the amino acid sequence having 95% or more identity with the amino acid sequence of SEQ ID NO: 3 or 4.

42.   (Previously Presented) The method according to claim 32, wherein the nucleotide sequence of (iv) of (a) encodes a protein having the amino acid sequence having 95% or more identity with the amino acid sequence of SEQ ID NO: 3 or 4.

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43.   (Currently Amended) The method according to claim 29, wherein the polypeptide of (a) is encoded by a polynucleotide comprising a sequence selected from the group consisting of:

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: [[4]] 3 or 4; and

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4.

44.   (Currently Amended) The method according to claim 32, wherein the polypeptide of (a) is encoded by a polynucleotide comprising a sequence selected from the group consisting of:

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: [[4]] 3 or 4; and

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4.